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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/420,918	10/20/1999	DAVID E. ROSENSTEIN	COVDP001	3432

23689 7590 05/11/2004

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EXAMINER

JUNTIMA, NITTAYA

ART UNIT PAPER NUMBER

2663

DATE MAILED: 05/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/420,918

Applicant(s)

ROSENSTEIN ET AL.

Examiner

Nittaya Juntima

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-19 and 21-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-19 and 21-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to the Amendment filed on February 24, 2004.
2. Claims 4 and 20 are cancelled in view of applicant's amendment paper no. 9.
3. Claims 17-19 are rejected under 35 U.S.C. 102(a).
4. Claims 7-8, 19-20, and 33-35 are rejected under 35 U.S.C. 103(a).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

6. **Claims 17-19** are rejected under 35 U.S.C. 102(a) as being anticipated by an applicant's admitted prior art (Fig. 1).

Per **claim 17**, as shown in Fig. 1, an applicant's admitted prior art teaches *a derived voice over data termination device* (MDF 120 which a DSL loop 118 carrying derived voice over data signals is terminated on) located in *a wire center* (central office 104) and coupled to a client premise (102) over *a single metal wire pair* (DSL loop 118), *a derived voice over data switch* (ATM switch 132) coupled to the derived voice over data termination device (MDF 120) and to *a public switched telephone network* (PSTN 150), and *a digital subscriber line access multiplexer* (DSLAM 122) coupled between the derived voice over data termination device (MDF 120) and the derived voice over data switch (ATM switch 132).

Per **claim 18**, the admitted prior art teaches the derived voice over data switch (ATM switch 132) is coupled to the public switched telephone network (PSTN 150) via *a voice gateway* (voice gateway 142) and *a voice switch* (class 5 voice switch 146).

Per **claim 19**, the admitted prior art teaches *a regional switching center* (130) which includes the derived voice over data switch (ATM switch 132).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 1-16 and 21-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over an applicant's admitted prior art (Fig. 1).

Per **claim 1**, as shown in Fig. 1, the admitted prior art teaches *a connection* (a DSL loop 118) carrying analog frequencies between *a client premise* (102) and the central office (104), *a digital subscriber line access multiplexer* (DSLAM 122) coupled to *an ATM switch* (132).

The admitted prior art fails to teach that (i) a derived voice over data termination device configured to convert between base band signals and derived voice over data signals utilizing derived voice over data technology is located outside of the client premise, (ii) the connection is connected between the client premise and the derived voice over data termination device, and (iii) the DSLAM is coupled to derived voice over data termination device as recited in claim 1.

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However, the admitted prior art teaches a derived voice over data termination device configured to convert between base band signals and derived voice over data signals utilizing derived voice over data technology (a VoATM 110 with a voice port, specification, pg. 7, ll 19-pg. 8, ll 1-7), and that when ADSL technology is utilized, (i) an ADSL CPE located at the client premise 102 and connected to the MDF 120 in the central office 104 via the DSL loop 118 provides a base-band analog voice port for a telephone 114, and (ii) a POTS splitter 129 connected to the MDF 120 sends and receives base-band analog voice signals to the PSTN via a voice switch (specification, pg. 9, ll 13-21).

Therefore, it would have been obvious to one skilled in the art to modify the teaching of the admitted prior art such that the derived voice over data termination device (VoATM 110) would be located outside the client premise, i.e. at the central office 104, and connected to the connection (DSL loop 118) and the DSLAM (122) as recited in the claim. Such modification involves routine skill in the art and would have been done by placing the VoATM 110 at the central office 104, replacing the VoATM 110 at the client premise 102 of Fig. 1 with the ADSL CPE (specification, pg. 9, ll 13-21), and connecting the base band analog voice signals, which are transmitted by the ADSL CPE to the central office 104 via the DSL loop 118 and separated from the data and derived voice over data signals by the POTS splitter 129, to the derived voice over data termination device (VoATM 110) in order for the base band analog voice signals to be forwarded to the regional network 130 through the DSLAM 122 which is already connected to the regional network 130/regional switch center 106 via the ATM switch 132. The suggestion/motivation to do would have been to, instead of forwarding the base band analog voice signals to the PSTN as taught in the admitted prior art (specification, pg. 9, ll 13-21),

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convert the base band analog voice signals from the ADSL CPE into derived voice over data signals in order to provide cost savings call connection to a customer connecting to a base band analog voice port of the ADSL CPE, e.g. in a case where the ADSL CPE does not have enough derived voice over data ports to support an additional derived voice over data customer.

Per **claim 2**, the admitted prior art does not teach that the connection premise (DSL loop 118 in Fig. 1) is powered by the derived voice over data termination device. However, it is well known in the art that a communication device located in the central office is powered by the central office and presents a constant source of line voltage, typically 48 volts, to a communication line connected to it. Therefore, it would have been obvious that once the derived voice over data termination device (VoATM 110) is connected to the connection, i.e. DSL loop 118, as explained in claim 1, the connection must then be powered by the derived voice over data termination device to maintain its operation.

Per **claim 3**, the admitted prior art teaches that the connection is over a single metal wire pair (DSL loop 118 in Fig. 1 is a twisted wire pair).

Per **claims 5 and 6**, the admitted prior art does not teach that the derived voice over data termination device (VoATM 110 located in central office 104 as explained in claim 1) is connected to the DSLAM (122) through one of the following ports: DSL (ADSL, SDSL, VDSL, HDSL, and RDSL), DS1, DS3, OC-3, OC-12, Ethernet, E3, E1, and OC 48.

However, in the Fig. 1 of the admitted prior art illustrates that the VoATM CEP 110 supports a DSL port and the DSLAM 122 connected to the ATM switch supports DSL ports, namely ADSL and SDSL as well. Therefore, it would have been obvious to one skilled in the art to modify the teaching of the admitted prior art such that when the derived voice over data

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termination device (VoATM 110) is placed in the wire center (central office 104) as explained in claim 1, it would then be connected to the DSLAM (122) using a DSL port, e.g. SDSL, which is also supported by the DSLAM (122). The suggestion/motivation to do so would have been to enable the derived voice over data termination device to communicate with the regional network 130/regional switching center 106 through the DSLAM (122).

Per **claims 7-9**, the admitted prior art does not teach that the derived voice over data termination device is a voice over ATM device, located in a wire center, and configured to receive and generate from base band voice signals packetized digital voice data. However, the admitted prior art teaches a VoATM 110 which is well known for receiving and generating from base band voice signals packetized digital voice data. Therefore, it would have been obvious to one skilled in the art to implement the derived voice over data termination device as a voice over ATM device such as a VoATM 110 and locate it in a wire center (central office 104). The suggestion/motivation to do so would have been to provide voice over ATM connection to the base band voice signals separated by the POTS splitter 129 for cost savings purposes as explained in claim 1.

Per **claims 10-15**, the admitted prior art teaches a customer premise equipment (an ADSL CPE, specification, pg. 9, ll 12-21) located at the client premise (102) and coupled to the connection (DSL Loop 118) which is coupled to a MDF (120) and a POTS splitter (129) for the separation between digital data signals and base band voice signals, and is configured to receive base band voice signals and digital data signals (Fig. 1 and specification, pg. 9, ll 12-21). The admitted prior art does not teach the arrangement of the derived voice over data termination device (VoATM 110 located in central office 104 as explained in claim 1) as recited in claims

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10, 12, 13, 14, and 15. However, as explained in claim 1, it would have been obvious to modify the teaching of the admitted prior art such that the derived voice over data termination device (VoATM 110 located in central office 104 as explained in claim 1) would be arranged as recited in the limitations of claims 10, 12, 13, 14, and 15. The suggestion/motivation to do so would have been to provide voice over ATM connection to the base band voice signals separated by the POTS splitter 129 for cost savings purposes as explained in claim 1.

Per **claim 16**, tThe admitted prior art fails to teach that the voice over data termination device (VoATM 110) is configured to support transmission to a multiplexer and a switch utilizing DSL, D1, DS3, OC-3, OC-12, Ethernet, E3, E1, and OC48. However, since the admitted prior art also teaches that the voice over data termination device (VoATM 110 as shown in Fig. 1) supports a DSL port, and the multiplexer (DSLAM 122) is connected to the switch (ATM switch 132) and supports DSL, DS1, DS3, OC-3, OC-12, Ethernet, E3, E1, and OC48 ports (specification, pg. 8, ll 22-23), it would have been obvious to one skilled in the art to modify the teaching of the admitted prior art such that the derived voice over data termination device (VoATM 110) when located in a wire center (central office 104) as explained in claim 1 would be configured to support transmission to the multiplexer (DSLAM 122) and the switch (ATM switch 132) utilizing DSL, DS1, DS3, OC-3, OC-12, Ethernet, E3, E1, and OC48. The suggestion/motivation to do so would have been to connect the derived voice over data termination device (VoATM 110 located in central office 104 as explained in claim 1) to the switch (ATM switch 132) using the ports that are available and supported by the multipelxer (DSLAM 122) in order to provide voice over ATM connection through the regional network (130) and the regional switching center (106).

Per **claim 21**, as shown in Fig. 1, the admitted prior art teaches *a wire center* (central office 104), *a base-band analog connection* (DSL loop 118) between *the client telephone* (telephone 114) and the wire center (104), transmitting *base band analog voice signals* (analog voice signals from telephone 114) between *the client telephone* (telephone 114) and the wire center (104), transmitting *derived voice over data signals* (VoATM signals) between the wire center (104) and *a voice gateway* (142) connected to *a PSTN* (150) via *a DSLAM* (122) and the voice gateway (142).

The admitted prior art fails to teach that the derived voice over data termination device (VoATM 110 with a voice port, specification, pg. 7, ll 19-pg. 8, ll 1-7) is located in a wire center (central office 104) and connected to the base-band analog connection for transmitting base-band analog voice signals and derived voice over data signals as recited in the claim.

However, the admitted prior art also teaches (i) a derived voice over data termination device (VoATM 110 with a voice port and a DSL port, specification, pg. 7, ll 19-pg. 8, ll 1-7), and (ii) that when ADSL technology is utilized, (a) an ADSL CPE located at the client premise 102 and connected to the MDF 120 in the central office 104 via the DSL loop 118 provides a base-band analog voice port, a data port, and/or one or more derived voice over data ports, and (b) a POTS splitter 129 connected to the MDF 120 sends and receives base-band analog voice signals to the PSTN via a voice switch (specification, pg. 9, ll 13-21).

Therefore, it would have been obvious to one skilled in the art to modify the teaching of the admitted prior art such that the derived voice over data termination device (VoATM 110) would be located outside the client premise, i.e. at the central office 104, and connected to the base band analog connection (DSL loop 118) and the DSLAM (122) for transmitting base-band

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analog voice signals and derived voice over data signals as recited in the claim. Such modification involves routine skill in the art and would have been done by placing the VoATM 110 at the wire center (central office 104), replacing the VoATM 110 at the client premise 102 of Fig. 1 with the ADSL CPE (specification, pg. 9, ll 13-21), connecting the base band analog voice signals, which are transmitted by the ADSL CPE to the central office 104 via the DSL loop 118 and separated from data signals by POTS splitter 129, to the derived voice over data termination device (VoATM 110) and transmitting derived voice over data signals from the derived voice over data termination device (VoATM 110) to a voice gateway (142) via the DSLAM (122) which is already connected to the regional network 130/regional switch center 106. The suggestion/motivation to do so would have been to provide cost savings call connection to a customer connecting to a base band analog voice port of the ADSL CPE, e.g. in a case where the ADSL CPE does not have enough derived voice over data ports to support an additional derived voice over data customer.

Per **claim 22**, the admitted prior art teaches that the base-band analog connection (DSL loop 118 in Fig. 1) is over a single metal wire pair.

Per **claim 23**, the admitted prior art in Fig. 1 teaches base-band analog connection (DSL loop 118), the client telephone (114), a splitter (POTS splitter 129), and transmitting digital data signals (data signals from LAN 112) between a client premise equipment (a PC connected to LAN 112) and the splitter (129) over the single metal wire pair (DSL loop 118).

However, the admitted prior art fails to teach the base-band analog connection is between the client telephone (114) and the derived voice over data termination device (VoATM 110 as explained in claim 21). It would have been obvious to one skilled in the art to modify the

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teaching of the admitted prior art such that the base-band analog connection would be connected between the client telephone (114) and the derived voice over data termination device (VoATM 110 as explained in claim 21). The suggestion/motivation to do so would have been to convert the base band analog voice signals from the ADSL CPE into derived voice over data signals in order to provide cost savings call connection to a customer connecting to a base band analog voice port of the ADSL CPE, e.g. in a case where the ADSL CPE does not have enough derived voice over data ports to support an additional derived voice over data customer.

Per **claim 24**, the admitted prior art in Fig. 1 teaches transmitting digital data signals (data signals from ADSL CPE, see specification, pg. 9, ll 13-21) between the splitter (129) and the DSLAM (122).

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nittaya Juntima whose telephone number is 703-306-4821. The examiner can normally be reached on Monday through Friday, 8:00 A.M - 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 703-308-5340. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

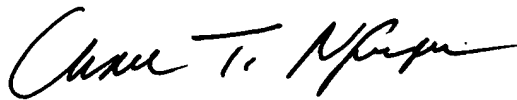
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nittaya Juntima

May 7, 2004

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